

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
27 May 2004 (27.05.2004)

PCT

(10) International Publication Number
WO 2004/044252 A1

(51) International Patent Classification⁷: C21D 8/12

(21) International Application Number:
PCT/KR2003/002413

(22) International Filing Date:
11 November 2003 (11.11.2003)

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:
10-2002-0069648 11 November 2002 (11.11.2002) KR
10-2002-0074327 27 November 2002 (27.11.2002) KR

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(81) Designated States (national): CN, JP, US.

(84) Designated States (regional): European patent (DE, FR, GB, IT).

Published:
— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2004/044252 A1

(54) Title: METHOD FOR MANUFACTURING HIGH SILICON GRAIN-ORIENTED ELECTRICAL STEEL SHEET WITH SUPERIOR CORE LOSS PROPERTY

(57) Abstract: There is provided a method for manufacturing a high silicon grain-oriented electrical steel sheet. In a method for manufacturing a high silicon grain-oriented electrical steel sheet, comprising the steps of: reheating and hot-rolling a steel slab to produce a hot-rolled steel sheet; annealing the hot-rolled sheet and cold rolling the annealed steel sheet so as to adjust a thickness of the steel sheet; decarburization annealing the cold rolled steel sheet; and finish-annealing the decarburization annealed steel sheet for secondary recrystallization, the improved method further comprising the step of: coating a powder coating agent for siliconization on a surface of the decarburization annealed steel sheet in a slurry state, the powder coating agent including 100 part by weight of MgO powder and 0.5 - 120 part by weight of sintered powder of Fe-Si compound containing 25-70 wt.% Si sintered powder, the sintered powder having a grain size of -325 mesh; drying the resultant decarburization annealed steel sheet; and finish annealing the steel sheet under a conventional condition.